

Lightsource Test Report

Product Information

Product Category: LED-Röhre
 Product Spec: LEDtube-060-8NWC-09W-TRF
 Manufacturer: METOLIGHT
 Buyer: 6961

Product Type: LED-Röhre-TRF
 Product Number: 1
 Submitted Unit: 102271

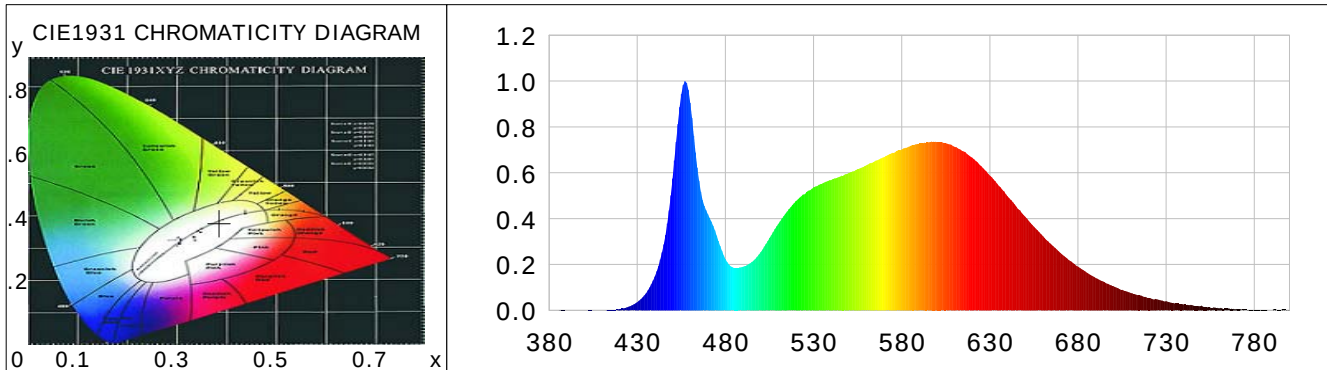
CIE Colorimetric Parameters

Chromaticity coordinates: $x=0.3854$ $y=0.3791$ $u(u')=0.2274$ $v=0.3356$ $v'=0.5033$
 CCT: $T_c=3885K$ ($duv=-0.00033$) Color Ratio: $R=0.190$ $G=0.775$ $B=0.035$
 Peak Wavelength: 457.2nm Half Bandwidth: 17.5nm
 Dominant Wavelength: 579.7nm Color Purity: 0.294
 CRI: $R_a=83.4$, $avgR(1\sim14)=76.6$, $avgR(1\sim15)=76.7$ TM30: $R_f=82$, $R_g=94$
 GAI: $GAI_BB_8=92.2$, $GAI_BB_15=101.4$, $GAI_EES=71.0$

R1 =83	R2 =91	R3 =95	R4 =80	R5 =81	R6 =86	R7 =86	R8 =66
R9 =17	R10=76	R11=77	R12=54	R13=85	R14=97	R15=78	

Color Quality Scale: $Q_a=81.7$, $Q_f=81.8$, $Q_p=81.5$, $Q_g=92.3$

Q1 =82	Q2 =97	Q3 =77	Q4 =71	Q5 =76	Q6 =79	Q7 =84	Q8 =88
Q9 =97	Q10=89	Q11=85	Q12=84	Q13=84	Q14=75	Q15=78	



Photometric Parameters

Luminous Flux: 1353.2 lm	Efficiency: 147.41 lm/W	Radiant Power: 4.107 W
Total mains efficacy: 173.35 lm/W	Energy Efficiency Class: C (EU 2019/2015)	
Pupil Flux: 2008.05 Plm	Pupil Lumens Per Watt: 218.74 Plm/W	Pupil Factor (Kp): 1.484
Cirtpic Flux: 4075.29 lm		

Electric Parameters

Voltage: 230.90V	Current: 0.0397A	Power: 9.18W
Power Factor: 0.9710	Frequency: 49.99Hz	

Test Information

Scan Range: 380~800:1nm	Photometric Method: sphere-spectroradiometer
Stabilization Time: 0 ms ALC.: 1.0000	Photometric Condition: Sphere diameter: 2.00m, 4PI
Max of Signal: 46062 (2405)	CCD Integration Time: 112.07 ms

Condition: Tx:20.1'C, Ti:0.0'C, R.H.:60%
 Test Lab:
 Operator: CRE

Test Device: Lisun LMS-9000B
 Test Time: 2021-01-14 13:35:58
 Inspector:

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WL(nm)	PL	PE(mW/nm)	WL(nm)	PL	PE(mW/nm)	WL(nm)	PL	PE(mW/nm)
380	0.0004	0.0142	525	0.5068	16.1347	670	0.2506	7.9795
385	0.0005	0.0163	530	0.5364	17.0772	675	0.2181	6.9438
390	0.0006	0.0193	535	0.5529	17.6045	680	0.1906	6.0694
395	0.0001	0.0046	540	0.5684	18.0975	685	0.1647	5.2423
400	0.0007	0.0224	545	0.5835	18.5787	690	0.1416	4.5093
405	0.0005	0.0145	550	0.5992	19.0762	695	0.1229	3.9139
410	0.0011	0.0363	555	0.6157	19.6037	700	0.1055	3.3589
415	0.0022	0.0713	560	0.6327	20.1437	705	0.0900	2.8642
420	0.0062	0.1978	565	0.6523	20.7682	710	0.0754	2.4014
425	0.0154	0.4908	570	0.6687	21.2911	715	0.0662	2.1079
430	0.0357	1.1358	575	0.6869	21.8707	720	0.0543	1.7296
435	0.0743	2.3670	580	0.7022	22.3568	725	0.0476	1.5153
440	0.1476	4.6988	585	0.7174	22.8414	730	0.0399	1.2708
445	0.2880	9.1708	590	0.7279	23.1763	735	0.0294	0.9368
450	0.5749	18.3043	595	0.7324	23.3196	740	0.0255	0.8131
455	0.9433	30.0339	600	0.7338	23.3635	745	0.0218	0.6952
460	0.9055	28.8282	605	0.7289	23.2052	750	0.0207	0.6602
465	0.5658	18.0129	610	0.7131	22.7021	755	0.0124	0.3949
470	0.4198	13.3647	615	0.6938	22.0896	760	0.0085	0.2698
475	0.3263	10.3890	620	0.6662	21.2089	765	0.0084	0.2667
480	0.2240	7.1332	625	0.6295	20.0431	770	0.0060	0.1918
485	0.1845	5.8739	630	0.5876	18.7078	775	0.0037	0.1190
490	0.1904	6.0631	635	0.5437	17.3106	780	0.0031	0.0995
495	0.2110	6.7190	640	0.4971	15.8274	785	0.0024	0.0771
500	0.2538	8.0810	645	0.4527	14.4128	790	0.0012	0.0382
505	0.3156	10.0486	650	0.4090	13.0231	795	0.0017	0.0551
510	0.3776	12.0209	655	0.3648	11.6159	800	0.0029	0.0928
515	0.4308	13.7164	660	0.3251	10.3508			
520	0.4770	15.1859	665	0.2864	9.1196			

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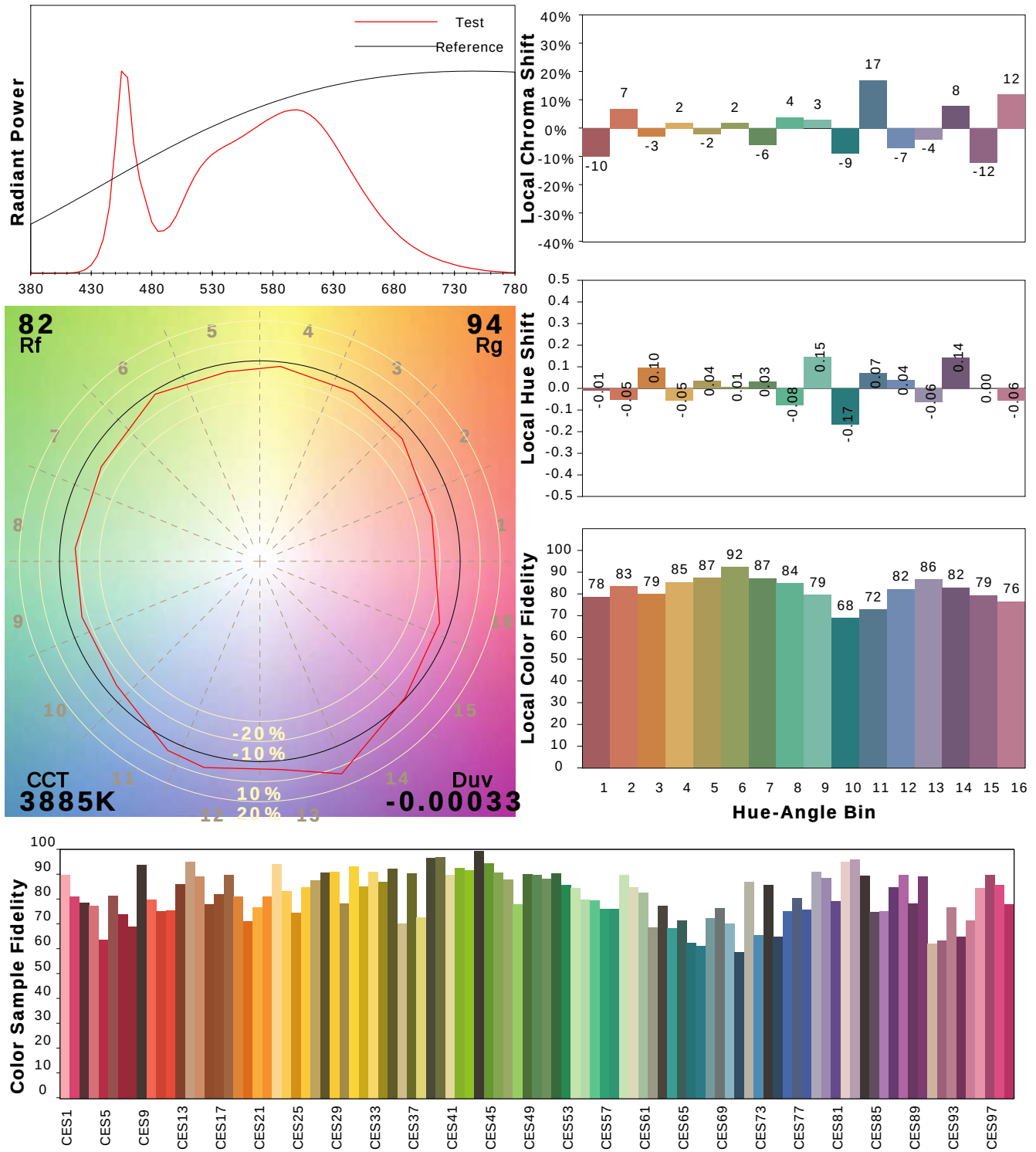
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IES TM-30-18 Color Rendition Report

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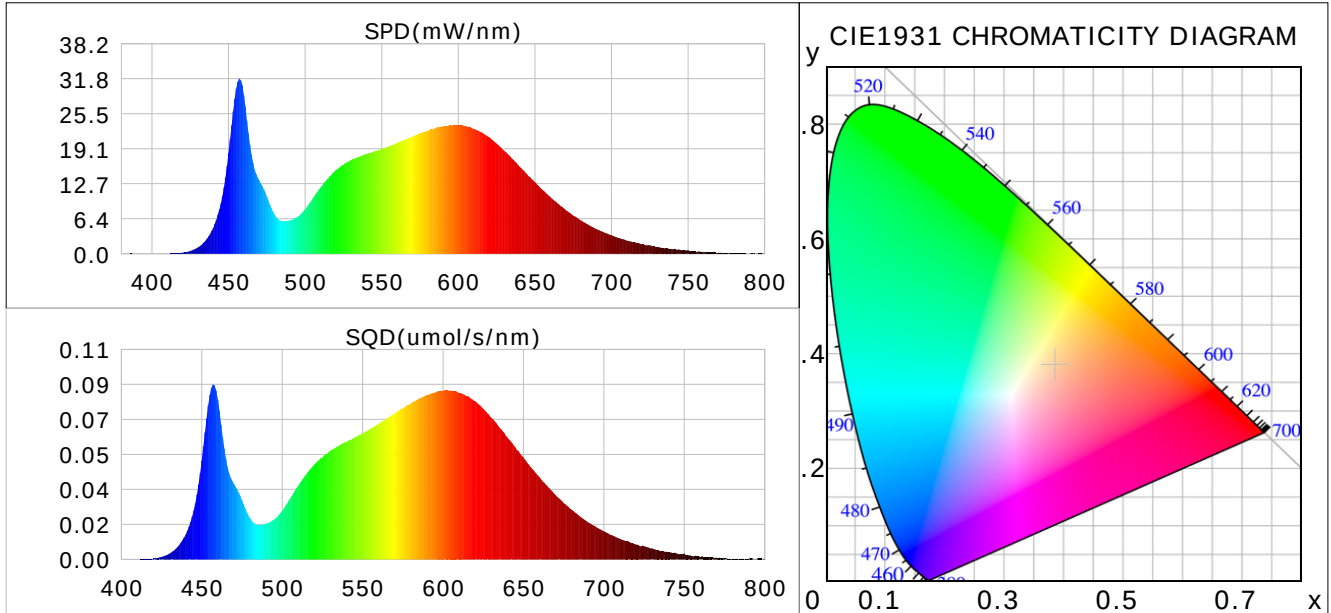
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Plant optical param data

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 Dominant Wavelength: 579.7nm Color Purity: 0.294
 CRI: Ra= 83.4



Plant Optical Param

$\mu_v(lm): 1353.20$	$Q_v(lm.s): 1353.20$
$\mu_e, \dot{E}(W/nm): 4.11$	$Q_e(J): 4.11$
$\mu_e(W): 4.02$	$\mu_{fr}(W): 0.09$
$\dot{C}_e: 0.44$	$\dot{C}_{fr}: 0.01$
$PPE(umol/s/w): 2.06$	$K_{fr}: 0.06$
$Erb_Ratio: 1.59$	$PPF(umol/s): 18.93$
$PF_{uv}(360-400)(umol/s): 0.00$	$PPF(400-500)(umol/s): 3.25$
$PPF(500-600)(umol/s): 8.62$	$PPF(600-700)(umol/s): 7.07$
$PF_{fr}(700-800)(umol/s): 0.54$	$PPF.t(umol): 18.93$
$\mu_{ch-A.t}(J): 0.30$	$\mu_{ch-A}(W): 0.30$
$\mu_{ch-B.t}(J): 0.19$	$\mu_{ch-B}(W): 0.19$
$\mu_{b.t}(J): 0.84$	$\mu_b(W): 0.84$
$\mu_{y.t}(J): 1.86$	$\mu_y(W): 1.86$
$\mu_{r.t}(J): 1.35$	$\mu_r(W): 1.35$

Electric Parameters

Voltage: 230.90V	Current: 0.0397A	Power: 9.18W
Power Factor: 0.9710	Frequency: 49.99Hz	

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